

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An active matrix display device having a pixel matrix circuit, said pixel matrix circuit comprising:

at least one active layer comprising crystalline semiconductor film over an insulating surface of ~~[[said]]~~ a substrate, said active layer having at least channel, source, and drain regions of a thin-film transistor;

a gate electrode formed over the channel region with ~~[[an]]~~ a gate insulating film therebetween;

a pair of side walls formed adjacent to side surfaces of the gate electrode;

a pair of low impurity concentration regions formed in the active layer below the side walls; and

an auxiliary capacitor comprising a first electrode connected to one of the source and drain regions ~~formed on the first electrode~~ regions, and a second electrode,

wherein the channel region has a plurality of crystals extending approximately in parallel with a carrier flow direction of the channel region.

2. (Original) The device according to claim 1, wherein said active matrix display device is a liquid crystal device.

3. (Original) The device according to claim 1 further comprising a pixel electrode over the auxiliary capacitor wherein said pixel electrode is connected to said first electrode.

4. (Canceled)

5. (Currently Amended) An active matrix display device having a pixel matrix circuit, said pixel matrix circuit comprising:

at least one active layer comprising crystalline semiconductor film over an insulating surface of ~~[[said]]~~ a substrate, said active layer having at least channel, source, and drain regions of a thin-film transistor;

a gate electrode formed over the channel region with ~~[[an]]~~ a gate insulating film therebetween;

a pair of side walls formed adjacent to side surfaces of the gate electrode, wherein said active layer is provided with a pair of metal silicide regions formed on the source and drain regions;

a pair of low impurity concentration regions formed in the active layer below the side walls; and

an auxiliary capacitor comprising a first electrode connected to one of the source and drain ~~regions formed on the first electrode~~ regions, and a second electrode,

wherein the channel region has a plurality of crystals extending approximately in parallel with a carrier flow direction of the channel region.

6. (Original) The device according to claim 5, wherein said active matrix display device is a liquid crystal device.

7. (Original) The device according to claim 5 further comprising a pixel electrode over the auxiliary capacitor wherein said pixel electrode is connected to said first electrode.

8. (Canceled)

9. (Currently Amended) An active matrix display device having a pixel matrix circuit, said pixel matrix circuit comprising:

at least one active layer comprising crystalline semiconductor film over an insulating surface of ~~[[said]]~~ a substrate, said active layer having at least channel, source, and drain regions of a thin-film transistor;

a gate electrode comprising crystalline silicon formed over the channel region with ~~[[an]]~~ a gate insulating film therebetween;

a pair of side walls formed adjacent to side surfaces of the gate electrode, wherein said active layer is provided with a pair of metal silicide regions formed on the source and drain regions;

a pair of low impurity concentration regions formed in the active layer below the side walls; and

an auxiliary capacitor comprising a first electrode connected to one of the source and drain ~~regions formed on the first electrode~~ regions, and a second electrode,

wherein an upper surface of said gate electrode comprises a metal silicide, and
wherein the channel region has a plurality of crystals extending approximately in parallel with a carrier flow direction of the channel region.

10. (Original) The device according to claim 9, wherein said active matrix display device is a liquid crystal device.

11. (Original) The device according to claim 9 further comprising a pixel electrode over the auxiliary capacitor wherein said pixel electrode is connected to said first electrode.

12. (Canceled)

13. (Currently Amended) ~~[[An]]~~ A projection device having an active matrix display device including a pixel matrix circuit, said pixel matrix circuit comprising:

at least one active layer comprising crystalline semiconductor film over an insulating surface of ~~[[said]]~~ a substrate, said active layer having at least channel, source, and drain regions of a thin-film transistor;

a gate electrode formed over the channel region with ~~[[an]]~~ a gate insulating film therebetween;

a pair of side walls formed adjacent to side surfaces of the gate electrode;

a pair of low impurity concentration regions formed in the active layer below the side walls; and

an auxiliary capacitor comprising a first electrode connected to one of the source and drain ~~regions formed on the first electrode~~ regions, and a second electrode,

wherein the channel region has a plurality of crystals extending approximately in parallel with a carrier flow direction of the channel region.

14. (Original) The device according to claim 13, wherein said active matrix display device is a liquid crystal device.

15. (Original) The device according to claim 13 further comprising a pixel electrode over the auxiliary capacitor wherein said pixel electrode is connected to said first electrode.

16. (Currently Amended) ~~[[An]]~~ A projection device having an active matrix display device including a pixel matrix circuit, said pixel matrix circuit comprising:

at least one active layer comprising crystalline semiconductor film over an insulating surface of ~~[[said]]~~ a substrate, said active layer having at least channel, source, and drain regions of a thin-film transistor;

a gate electrode formed over the channel region with ~~[[an]]~~ a gate insulating film therebetween;

a pair of side walls formed adjacent to side surfaces of the gate electrode, wherein said active layer is provided with a pair of metal silicide regions formed on the source and drain regions;

a pair of low impurity concentration regions formed in the active layer below the side walls; and

an auxiliary capacitor comprising a first electrode connected to one of the source and drain ~~regions formed on the first electrode~~ regions, and a second electrode,

wherein the channel region has a plurality of crystals extending approximately in parallel with a carrier flow direction of the channel region.

17. (Original) The device according to claim 16, wherein said active matrix display device is a liquid crystal device.

18. (Original) The device according to claim 16 further comprising a pixel electrode over the auxiliary capacitor wherein said pixel electrode is connected to said first electrode.

19. (New) The device according to claim 1, wherein said thin-film transistor has an operation temperature of 80°C-250°C.

20. (New) The device according to claim 5, wherein said thin-film transistor has an operation temperature of 80°C -250°C.

21. (New) The device according to claim 9, wherein said thin-film transistor has an operation temperature of 80°C -250°C.

22. (New) The device according to claim 13, wherein said thin-film transistor has an operation temperature of 80°C -250°C.

23. (New) The device according to claim 16, wherein said thin-film transistor has an operation temperature of 80°C -250°C.